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United States Patent [19][11] **Patent Number:** **5,799,004****Keskitalo et al.**[45] **Date of Patent:** **Aug. 25, 1998**[54] **METHOD FOR ELIMINATING MULTIPLE-ACCESS INTERFERENCE AND A MOBILE STATION**[75] Inventors: **Ilkka Keskitalo, Jääli; Arto Kiema, Oulu; Jari Savusalo, Oulu; Petri Jolma, Oulu, all of Finland**[73] Assignee: **Nokia Telecommunications, Espoo, Finland**[21] Appl. No.: **637,659**[22] PCT Filed: **Oct. 21, 1994**[86] PCT No.: **PCT/FI94/00478**§ 371 Date: **Jul. 2, 1996**§ 102(e) Date: **Jul. 2, 1996**[87] PCT Pub. No.: **WO95/11259**PCT Pub. Date: **May 4, 1995**[30] **Foreign Application Priority Data**

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[58] Field of Search 455/422, 423, 455/454, 501, 515, 524, 63, 303, 304, 305; 370/320, 335, 342; 375/200, 346, 349

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Attorney, Agent, or Firm—IP Group of Pillsbury Madison & Sutro LLP[57] **ABSTRACT**

A mobile station, and a method for eliminating multiple-access interference in a CDMA cellular radio system having a plurality of cells each having at least one base station communicating with mobile stations residing in the respective cell and informing the respective mobile stations of at least one spreading code used in a neighboring cell, the mobile stations measuring the code phase and power level of a channel of the neighboring cell using the known spreading code. To reduce the effect of multiple-access interference, the signal received at the mobile station is utilized in the detection of the desired signal by using the code phase and power level of the measured channel using the known spreading code of the neighboring cell.

13 Claims, 2 Drawing Sheets